

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1- 22 (cancelled)

23. (previously presented) A radiation source for use in endovascular radiation treatment, the radiation source comprising:

at least two treating elements wherein each treating element is spaced apart from the next one, wherein each treating element has a radiation emitting element and means for containment of said radiation emitting element, wherein said at least two treating elements are in an elongated container having at least one deflection site, wherein the at least one deflection site is located in the space between two treating elements.

24. (previously presented) The radiation source of claim 23, wherein the elongated container is a hollow cylinder.

25. (previously presented) The radiation source of claim 23, wherein the container is made from a highly flexible material.

26. (currently amended) ~~The radiation source of claim 25, wherein said flexible material is~~ A radiation source for use in endovascular radiation treatment, the radiation source comprising:

at least two treating elements wherein each treating element is spaced apart from the next one, wherein each treating element has a radiation emitting element and means for containment of

said radiation emitting element, wherein said at least two treating elements are in an elongated container having at least one deflection site, wherein the at least one deflection site is located in the space between two treating elements, and wherein the container is made from a highly flexible material selected from the group consisting of Ni-Ti-alloy and aluminium alloy.

27. (previously presented) The radiation source of claim 26, wherein said flexible material is selected from the group consisting of Nitinol and Tinal alloy BB.

28. (previously presented) A radiation source for use in endovascular radiation treatment, the radiation source comprising:

at least one treating element having a radiation emitting element and means for containment of said radiation emitting element,

wherein said at least one treating element is in an elongated container having at least one deflection site,

wherein the at least one deflection site comprises perforation patterns.

29. (previously presented) The radiation source as in claim 28, wherein said patterns are laser perforations of the container.

30. (previously presented) A radiation source for use in endovascular radiation treatment, the radiation source comprising:

at least one treating element having a radiation emitting element and means for containment of said radiation emitting element,

wherein said at least one treating element is in an elongated container having at least one deflection site,

wherein the at least one deflection site comprises multiple helical openings in the tube.

31. (previously presented) The radiation source of claim 23, wherein the at least one treating element comprises rounded or spherical end caps on one or both ends.

32. (previously presented) The radiation source of claim 23, wherein the at least one treating element is separated from each other by at least one spacer.

33. (previously presented) The radiation source of claim 32, wherein said spacer is in form of a sphere.

34. (previously presented) A radiation source for use in endovascular radiation treatment, the radiation source comprising:

at least one treating element having a radiation emitting element and means for containment of said radiation emitting element,

wherein said at least one treating element is in an elongated container having at least one deflection site,

wherein the [at least one treating element] is spaced from each other and fixed to the inner wall of the container.

35. (previously presented) The radiation source of claim 23, wherein said means for containment is a metallic capsule.

36. (previously presented) The radiation source of claim 23, wherein the radiation emitting element comprises any α -, β - and/or γ -emitting substance.

37. (previously presented) The radiation source of claim 36, wherein the radiation emitting element comprises one or more radioactive materials selected from the group consisting of Cs^{137} , Co^{57} , Sr^{89} , Y^{90} , Au^{198} , Pd^{103} , Se^{75} , Sr^{90} , Ru^{106} , P^{32} , Ir^{192} , Re^{188} , W^{188} and I^{125} .

19 / 38. (previously presented) An apparatus for endovascular radiation treatment, the apparatus comprising:

an elongated catheter having a proximal end portion,
a distal end portion and a first lumen for receiving a radiation source, and

a radiation source which comprises at least two treating elements, wherein each treating element is spaced apart from the next one, wherein each treating element has a radiation emitting element and means for containment of said radiation emitting element, wherein said at least two treating elements are in an elongated container having at least one deflection site,

wherein the at least one deflection site is located in the space between two treating elements.

39. (previously presented) The apparatus of claim 38, wherein the radiation source comprises a radiation emitting element comprising one or more radioactive materials selected from the group consisting of Cs¹³⁷, Co⁵⁷, Sr⁸⁹, Y⁹⁰, Au¹⁹⁸, Pd¹⁰³, Se⁷⁵, Sr⁹⁰, Ru¹⁰⁶, P³², Ir¹⁹², Re¹⁸⁸, W¹⁸⁸ and I¹²⁵ contained in a container made from a highly flexible material.

40. (previously presented) The apparatus of claim 38, further comprising a containment vessel for radiation protection.

41. (previously presented) An apparatus for endovascular radiation treatment, the apparatus comprising:

an elongated catheter having a proximal end portion,

a distal end portion and a first lumen for receiving a radiation source, and

a radiation source which comprises at least ~~one~~^{two} treating element comprising a radiation emitting element and means for containment of said radiation emitting element, wherein said at least two treating elements are in an elongated container having at least one deflection site, and a magnetic means for guiding the radiation source.

42. (previously presented) The apparatus of claim 38, further comprising an x-ray fluoroscopy device.

43. (previously presented) A method for endovascular radiation treatment comprising the steps of

(a) directing an elongated catheter, having a proximal end portion, a distal end portion and a lumen extending therebetween

for receiving a radiation source, to the selected site to be treated preferably by way of a guide wire in a separate lumen;

(b) introducing a radiation source into the catheter at its proximal end portion, which radiation source comprises at least two treating elements, wherein each treating element is spaced apart from the next one, wherein said at least two treating elements are in an elongated container having at least one deflection site, wherein the at least one deflection site is located in the space between two treating elements;

(c) moving said radiation source to said distal end portion preferably by way of a transfer wire;

(d) maintaining said radiation source at said distal end portion for a determined period of time; and

(e) retracting said radiation source to the proximal end portion preferably by use of a transfer wire.

44. (previously presented) The method of claim 43, wherein moving and/or retracting in steps (c) and/or (e) is achieved by pushing or pulling the radiation source.

45. (previously presented) The method of claim 43, wherein said movement in step (c) is achieved by pushing and said movement in step (e) is achieved by pulling said radiation source.

46. (previously presented) The method of claim 43, wherein the radiation source is linked to a transfer wire at its proximal end and moving in step (c) occurs by pushing the transfer wire into the catheter and retracting in step (e) occurs by pulling the transfer wire out of the catheter.

47. (previously presented) A method for endovascular radiation treatment comprising the steps of

(a) directing an elongated catheter, having a proximal end portion, a distal end portion and a lumen extending therebetween for receiving a radiation source, to the selected site to be treated preferably by way of a guide wire in a separate lumen;

(b) introducing a radiation source into the catheter at its proximal end portion, which radiation source comprises at least one treating element,

wherein said at least one treating element is in an elongated container having at least one deflection site;

(c) moving said radiation source to said distal end portion preferably by way of a transfer wire;

(d) maintaining said radiation source at said distal end portion for a determined period of time; and

(e) retracting said radiation source to the proximal end portion preferably by use of a transfer wire,

a radiation source comprising a magnetic elongated container is used and movement in steps (c) and/or (e) is achieved by magnetically pushing and/or pulling the radiation source using a transfer wire comprising a magnet or using an external magnetic means for guiding the radiation source.

48. (previously presented) The method of claim 43, wherein the radiation source comprises a radiation emitting element comprising one or more radioactive materials selected from the group consisting of Cs¹³⁷, Co⁵⁷, Sr⁸⁹, Y⁹⁰, Au¹⁹⁸, Pd¹⁰³, Se⁷⁵, Sr⁹⁰,

Ru^{106} , P^{32} , Ir^{192} , Re^{188} , W^{188} and I^{125} contained in a container made from a highly flexible material.

49. (previously presented) The apparatus of claim 38, further comprising a guide wire.

50. (previously presented) The apparatus of claim 38, further comprising a second lumen.

51. (previously presented) The apparatus of claim 41, further comprising a guide wire.

al 52. (previously presented) The apparatus of claim 41, further comprising a second lumen.
